

After the title, please insert the following paragraph:

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"This application is a divisional application of United States Application 09/381,086 was filed September 14, 1999, which was a continuation -in-part of PCT Application No. PCT/US98/06698 filed April 3, 1998, which claims priority to United States Provisional Patent Application No. 60/043,048 filed April 4, 1997.

In the claims:

Please cancel, without prejudice and without acquiescence, claims 1-33.

Please enter the following new claims:

34. A method for invasively determining the expression of PKC isozymes in colonocytes of a patient comprising:

directly isolating from said patient polyA+RNA from rectal vault eluate, containing sloughed colonocytes; and

assaying the isolated polyA+RNA and determining the level, in the isolated A+RNA, of mRNA encoding at least one PKC isozyme, wherein the PKC isozyme is PKC ζ and PKC β II.

35. The method of claim 34, wherein the level of expression of PKC isozymes PKC ζ and PKC β II is determined.

36. The method of claim 35, wherein the ratio of expression PKC β II to PKC ζ is determined.

37. The method of claim 36, further comprising the step of comparing the ratio of expression of PKC β II to PKC ζ in said patient with similarly determined ratios of PKC β II to PKC ζ in other patients with known conditions.

38. The method of claim 37, wherein the level of expression of PKC β II to PKC ζ in said patient is compared with similarly determined ratios of PKC β II to PKC ζ in at least two other patients, one with colon cancer and one without colon cancer.

39. The method of claim 35, wherein the level of PKC ζ is determined using the primer pair having Sequence ID Numbers 7 and 8, and the level of PKC β II is determined using the primer pair having Sequence ID Numbers 11 and 12.

40. A method for invasively detecting colonic biomarkers in a patient using rectal vault eluate messenger RNA comprising:

directly isolating, from said patient, polyA+RNA from rectal vault eluate containing sloughed colonocytes; and

assaying the isolated polyA+RNA and determining the level, in the isolated polyA+RNA, of mRNA encoding at least one colonic biomarker, wherein the colonic biomarker is PKC ζ and PKC β II.

41. The method of claim 40, wherein the level of expression of PKC isozymes PKC ζ and PKC β II is determined.

42. The method of claim 41, wherein the ratio of expression PKC β II to PKC ζ is determined.

43. The method of claim 42, further comprising the step of comparing the ratio of expression of PKC β II to PKC ζ in said patient with similarly determined ratios of PKC β II to PKC ζ in at least two other patients, one with colon cancer and one without colon cancer.

44. The method of claim 41, wherein the level of PKC ζ is determined using the primer pair Sequence ID Numbers 7 and 8, and the level of PKC β II is determined using the primer pair having Sequence ID Numbers 11 and 12.

45. A method for invasively screening for colon cancer in a patient comprising:

detecting the expression of PKC ζ and PKC β II in sloughed colonocytes in said patient's rectal vault eluate; and

correlating the expression of PKC ζ and PKC β II with the presence or absence of colon cancer in said patient.

46. The method of claim 45, wherein the level of expression of PKC isozymes PKC ζ and PKC β II is determined.

47. The method of claim 46, wherein the ratio of expression PKC β II to PKC ζ is determined.

48. The method of claim 47, further comprising the step of comparing the ratio of expression of PKC β II to PKC ζ in said patient with similarly determined ratios of PKC β II to PKC ζ in at least two other patients, one with colon cancer and one without colon cancer.

49. The method of claim 46, wherein the level of PKC ζ is determined using the primer pair having Sequence ID Numbers 7 and 8, and the level of PKC β II is determined using the primer pair having Sequence ID Numbers 11 and 12.